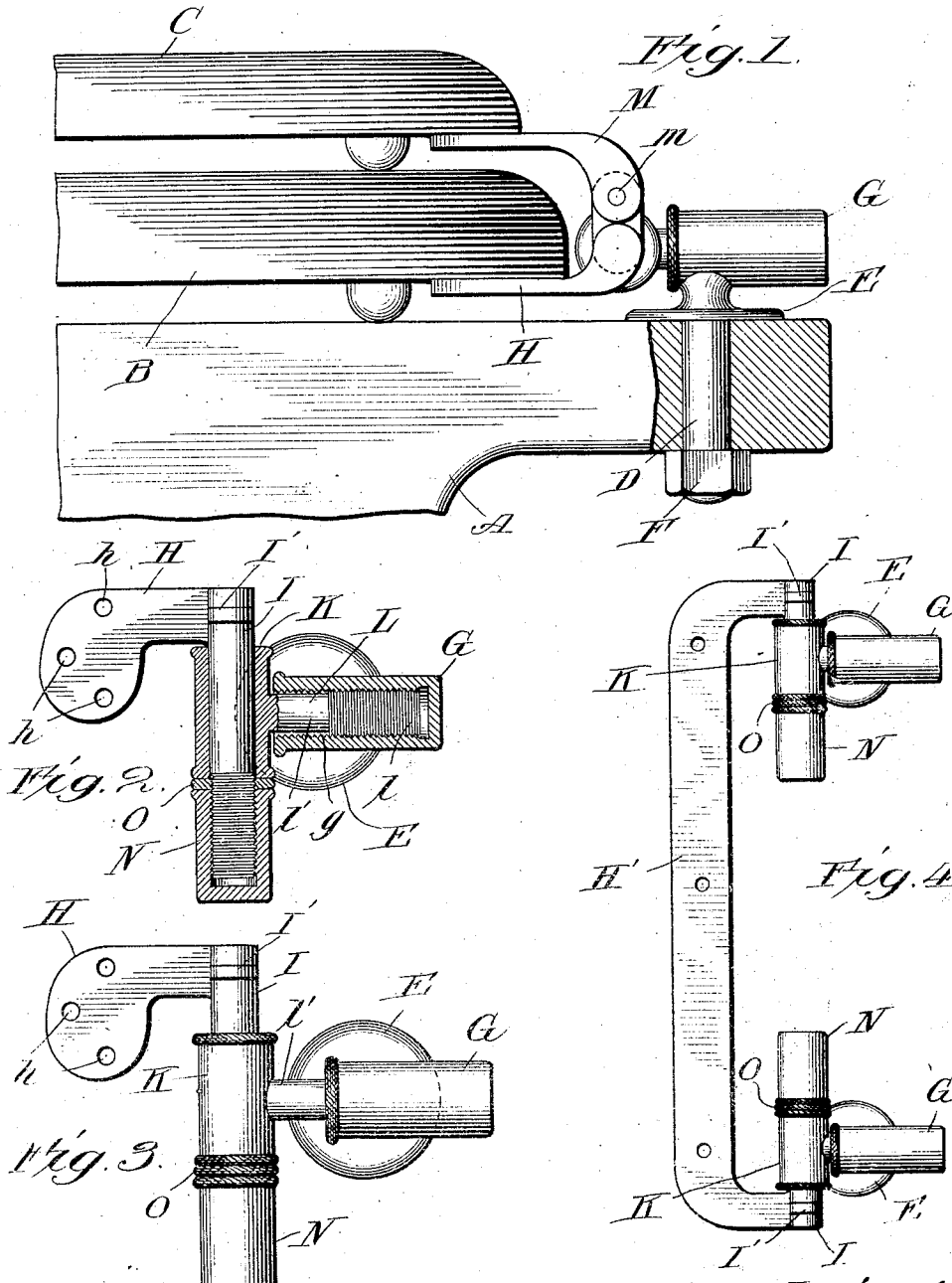


J. W. McAULIFFE.
HINGE FOR WATER CLOSET SEATS.
APPLICATION FILED NOV. 10, 1909.

1,010,658.

Patented Dec. 5, 1911.



Witnesses:

Harry S. Gaither
Brennan

Inventor:
John W. McAuliffe
by Chamberline & Freudenreich,
attys

UNITED STATES PATENT OFFICE.

JOHN W. McAULIFFE, OF CHICAGO, ILLINOIS.

HINGE FOR WATER-CLOSET SEATS.

1,010,658.

Specification of Letters Patent.

Patented Dec. 5, 1911.

Application filed November 10, 1909. Serial No. 527,149.

To all whom it may concern:

Be it known that I, JOHN W. McAULIFFE, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have invented a certain new and useful Improvement in Hinges for Water-Closet Seats, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to hinges and particularly to that type wherein posts projecting upwardly from the rear end of a water closet bowl are employed to mount the seat so that it may be swung about a horizontal axis. It is often necessary to place a bowl close to the wall or to locate the pipes which lead from the flushing tank so that they lie adjacent to or even overlie the top of the bowl; thereby forming a stop against which the seat bears when it is raised and preventing the seat from being tilted back far enough to enable it to stand upright.

The principal object of my invention is to provide a novel form of hinge wherein the joint may be adjusted backward and forward with respect to the supporting post so that a position of the joint may be found which will enable a seat to remain upright when raised, regardless of the distance between the post and wall in rear thereof and even though there be pipes or other obstructions in rear of the bowl which would ordinarily interfere with the seat when raised.

A further object of my invention is to provide an adjustable hinge for water closet seats wherein the joint of the hinge may be shifted backward and forward without making it necessary to leave a considerable space between the rear edge of the seat and the post or posts.

A further object of my invention is to provide a novel form of post for use on water closets whereby the seat and the hinge joint may be shifted backward and forward simultaneously relative to the post.

A further object of my invention is to provide a novel form of adjustment for hinges of the character described, wherein the parts which afford the adjustment are located in rear of the front face of the supporting post.

A further object of my invention is to

provide a novel form of hinge of the character described, wherein adjustment may be made in two directions at right angles to each other so as to provide for posts arranged at various distances apart and at various distances from the rear edge of the bowl.

The various features of novelty whereby my invention is characterized will hereinafter be pointed out with particularity in the claims; but, for a full understanding of my invention and of its objects and advantages, reference may be had to the following detailed description taken in connection with the accompanying drawing, wherein:

Figure 1 is a side elevation of a fragment of a water closet bowl and seat showing a preferred form of hinge, a portion of the bowl being shown in section so as to expose the post for its entire length; Fig 2 is a horizontal section through the hinge and post, showing the adjusting means, and one of the hinge members being shown in plan; Fig. 3 is a top plan view of one of the hinges, showing the parts adjusted differently than in Fig. 2; and Fig. 4 is a plan view of a double hinge.

Referring to the drawing, A represents a water closet bowl, B a water closet seat, and C a cover or lid, all of these parts being of any usual or preferred construction.

D is a post, of which there are usually two, mounted in any suitable way upon the bowl in rear of the seat, to serve as anchors for the seat. The post illustrated is of a common form having a flange E near the upper end of a nut F on the lower end, a portion of the bowl being clamped between the flange and the nut. In accordance with my invention, I associate with the post a hinge-carrying member which permits the hinge to be adjusted bodily backward and forward. It is desirable that the parts be so constructed that no unnecessary space is required between the rear edge of the seat and the posts, because the posts are often arranged upon the bowls so that the rear edge of the seat must be brought quite close thereto. I therefore arrange the hinge-carrying member so that it lies substantially in rear of the posts and will not interfere with the seat, even when the latter is arranged close to the posts. This may be accomplished in various ways, preferably by associating with the posts an elongated internally screw-threaded thimble which extends at right angles to the post and lies at

one side thereof, one member of the hinge being provided with a screw-threaded stem which is received in the thimble and which may be adjusted in or out as circumstances may require. The location of the thimble in respects other than those just enumerated may be varied within wide limits as may also the method of connecting it to the post. In the arrangement shown, the thimble G is mounted directly upon the upper end of the post and is cast integral therewith, the post and the thimble forming an L-shaped member, one arm of which is internally screw-threaded and open at the inner end. When the post is in place it is so positioned that the thimble extends rearwardly at right angles to the rear edge of the seat.

One member H of the hinge may be in the form of an ordinary leaf which is adapted to be secured to the seat in any usual way as, for example, by means of screws passing through perforations h. Secured at one end of the member H is a journal I which is adapted to be received in a bearing member K to form the hinge joint. L is a screw-threaded stem projecting from the member K at right angles to the axis thereof, the screw-threads l meshing with the screw-threads g in the thimble. It will be seen that when the member H is secured to the seat, the parts being otherwise assembled as illustrated, the seat is pivotally secured in place so that it may be swung about the axis of the journal and journal bearing. In assembling the parts upon a bowl, the stem L is screwed in or out as may be required so as to locate the seat properly on the bowl or to carry the pivotal axis of the seat forward, when necessary, so as to enable the seat to remain upright when it is raised against the wall or the piping in rear of the bowl. The journal I may be provided with an upwardly-projecting ear I¹ to which may be pivotally connected as at m, a member M which is in turn connected to the cover C. Consequently the cover may be lifted independently of the seat or the cover and seat may be lifted simultaneously and swung about the journal I. I prefer to provide the inner end of the stem L with a reduced portion Z¹ which is left free from screw-threads so that when the stem is screwed outwardly to carry the hinge joint away from the post, the screw-threads on the stem will not be exposed to view.

In Figs. 1 and 2, the stem is shown in a position wherein it has been entered into the thimble as far as it will go, while in Fig. 3 the stem has been carried forward a considerable distance. It is also desirable to provide adjustment in the lateral direction in order to make provision for variously shaped post holes in the bowls. This may also be accomplished in various ways,

one of the simplest being to make the journal I considerably longer than the bearing member and provide it with an adjustable stop N which is adapted to bear against one end of the bearing member. Consequently, by adjusting the stop, the bearing member can be moved axially of the journal so that the distance between the posts, where there are two posts, need not remain proportional to the distance between the two hinge members H. In the arrangement shown the adjustable stop is in the form of an elongated thimble screw-threaded upon the free end of the journal, there being a locknut O to hold the thimble in the position to which it may have been adjusted. The manner of producing the lateral adjustment is also apparent from Figs. 2 and 3, these two figures showing the parts in different adjusted positions.

In Fig. 4, I have shown a slight modification in which all of the parts are the same as those heretofore described, except that a single hinge member H¹ is used instead of two of the hinge members H in the other form, the two journals I being carried upon the ends of the member H¹.

While I have described in detail only a single preferred form of adjusting means, I do not desire to be limited to this single form, but intend to cover all constructions and arrangements which fall within the terms of the definitions of my invention constituting the appended claims.

What I claim is:

1. A post for a water closet seat comprising two arms arranged at right angles to each other in the form of an L, fastening means on one of said arms for securing the post in position, the other of said arms having an elongated socket extending lengthwise thereof and adapted to lie at right angles to the transverse axis of the seat, said socket being open at the end of the arm which is adjacent to the other arm.

2. A post for a water closet seat comprising an integral L-shaped member composed of two arms arranged at right angles to each other, fastening means for the post arranged on one of said arms, and the other of said arms having an elongated screw-threaded socket extending lengthwise thereof and open at the end of the arm which is adjacent to the other arm, one of said arms being adapted to be secured to the bowl in rear of the seat and the other being adapted to extend rearwardly therefrom at right angles to the axis about which the seat is to swing.

3. A hinge for a water closet seat comprising an L-shaped member, relatively adjustable shoulders on one arm of said member to clamp it in place, the other arm of said member having a long socket extending lengthwise thereof and open at the inner end of the arm, a stem adjustably supported

in said socket and forming with the post a T-shaped member, and a hinge leaf pivoted to the outer end of said stem so as to swing about an axis at right angles to the axis of said socket.

4. A hinge for a water closet seat comprising a pair of separated posts, open thimbles projecting rearwardly from the posts at the upper ends thereof, stems adjustably mounted in said thimbles and projecting in front of the posts, and hinge leaves pivoted to the front ends of said stems so as to swing about axes at right angles to the axes of said thimbles, said leaves being adapted to be secured to the seat.

5. In combination, a hinge member having an elongated journal secured thereto at one end, a second hinge member having a journal bearing to receive said journal, an adjustable shoulder on the journal to engage with one end of the bearing, an elongated thimble screw-threaded on said second hinge member, the axis of the thimble extending at right angles to said journal and the parts being so proportioned and arranged that the thimble may be adjusted into proximity to the said bearing, and a post extending from and at right angles to said thimble at the end thereof nearest said bearing.

6. A hinge support for a water closet seat comprising a pair of separated posts, elongated internally screw-threaded thimbles arranged back of and upon the upper ends of the posts and extending at right angles to the axis about which the seat is to swing, stems screw-threaded into said thimbles so as to be adjustable axially thereof for considerable distances, and hinge leaves pivoted to the free ends of said stems and adapted to be connected to the seat.

7. A hinge support for a water closet seat comprising a pair of separated posts, elongated internally screw-threaded thimbles arranged back of and upon the upper ends of the posts and extending at right angles to the axis about which the seat is to swing, stems screw-threaded into said thimbles so as to be adjustable axially thereof for considerable distances, and hinge leaves pivotally supported on said stems so as to be adjustable transversely relative to the stem, said hinge leaves being adapted to be secured to the seat and said posts being adapted to be secured to the bowl in rear of the seat.

8. A hinge support for a water closet seat comprising a pair of separated L-shaped posts one arm of each of said posts being adapted to hold the post to a fixed support and the other arms extending rearwardly away from and at right angles to the axis about which the seat is to swing, the latter arms of the posts having elongated sockets extending longitudinally therein and open at the ends nearest the seat, stems adjustably mounted in said socket so as to be capable of being moved from and toward the seat, and hinge leaves pivoted to the free ends of said stems and adapted to be connected to the seat.

9. A post for a water closet seat comprising two arms arranged in the form of an L, fastening means on one of said arms for securing the post in position, and a member adjustably mounted on the other arm so as to form with the two arms a T-shaped device.

In testimony whereof, I sign this specification in the presence of two witnesses.

JOHN W. MCAULIFFE.

Witnesses:

WM. F. FREUDENREICH,
BRISEUS SWEET.